

REMARKS

The Office Action of November 28, 2008 has been received and its contents carefully considered.

The allowance of claims 14, 17, 19, and 21 (see page 8 of the Office Action) is noted with satisfaction. The present Amendment revises claim 14 to improve its form under US claim-drafting practice. The main change is that several elements that were previously recited in the preamble of claim 14 are now recited in the body of the claim. In addition, “light-emitting part” has been changed to “light-emitting layer” for improved agreement with subsequent recitations. Despite the changes that have been made in claim 14, it is respectfully submitted that the scope of the claim has not been expanded and that it therefore remains allowable.

The Office Action only “objects” to dependent claims 28 and 29 (see page 8 of the Office Action again), and advises that they are would be allowable if they are rewritten in independent form. The present Amendment revises claim 27 by amending it to include the subject matter of independent claim 22 (with revisions to improve its form, as in claim 14) and dependent claim 27. Accordingly, it is respectfully submitted that claim 28 is now in condition for allowance, along with claim 29 (which depends from claim 28).

The present Amendment also revises independent claims 11 and 22 along the lines of claim 14, as discussed above. In addition, the Amendment makes changes of a substantive nature to claims 11, 18, and 22 in order to further distinguish the inventions defined by these claims from the prior art.

The rejection of independent claim 18 will be addressed after the rejection of independent claims 11 and 22.

The Office Action rejects independent claims 11 and 22 (along with several dependent claims) for obviousness based on US patent 6,501,217 to Beierlein et al and US patent 5,891,554 to Hosokawa et al. These references will hereafter be called simply “Beierlein” and “Hosokawa” for the sake of convenient discussion. For the reasons discussed below, however, it is respectfully submitted that the inventions now defined by claims 11 and 22 are patentable over these references.

Figure 5 of the Beierlein reference shows a contact pad 26 on a substrate 25. Above these elements are a barrier layer 27, an anode modification layer 28, a hole transport layer 29, an electron transport layer 30, and a transparent cathode 31. The Office Action takes the position that the Beierlein reference discloses most of what is recited in the rejected claims. In particular, the Office Action asserts that Beierlein's anode modification layer 28 corresponds to the "transparent electrically conductive film" of the rejected claims and that Beierlein's electron transport layer 30 and hole transport layer 29 together correspond to the "light-emitting layer" of the claims. The Office Action acknowledges that Beierlein does not teach the optical distance L of the claims, but takes the position that this would have been obvious from Hosokawa.

However, Beierlein does not include his anode modification layer 28 for the purpose of adjusting the dimensions of his device in order to enhance its optical properties. Instead, Beierlein teaches that the purpose of his anode modification layer 28 is to permit low voltage hole injection into the hole transport layer 29 (see the sentence bridging columns 6 and 7 of the reference).

Claims 11 and 22 now recite "first means" for injecting first carriers and transporting them to the "organic light-emitting layer" and "second means" for injecting second carriers and transporting them to the "organic light-emitting layer." It is respectfully submitted that Beierlein's anode modification layer 28 can no longer be characterized as the "transparent electrically conductive film" of the rejected claims, since Beierlein's layer 28 must now be considered part of the "first means" of independent claims 11 and 22.

Turning now to the Hosokawa reference, the Office Action points out a passage in column 5 of the reference as an example of adjusting thickness to enhance optical properties. Hosokawa's electroluminescent device includes a substrate, a transparent electrode with a high index of refraction in order to promote reflection at the interface with the substrate, an organic multi-layer part, and a cathode (see the paragraph beginning at column 4 of the reference, line 44). The passage noted in the Office Action pertains to the total thickness of the transparent electrode of high reflectivity and the organic multi-layer part. However, in independent claims 11 and 22, L is "the optical distance from the

organic light-emitting layer to the metal electrode.” This is different from what Hosokawa teaches.

In summary, (1) Beierlein does not use his anode modification layer 28 for the purpose of enhancing optical properties, (2) Beierlein’s layer 28 must now be considered part of the “first means” of independent claims 11 and 22 and is therefore not available as the “transparent electrically conductive film” of the claims, and (3) Hosokawa teaches enhancing optical properties by adjusting the total thickness of the an organic multi-layer part plus a transparent electrode of high reflectivity that is disposed next to a substrate. It is therefore respectfully submitted that Beierlein and Hosokawa together would not have led an ordinarily skilled person to the inventions defined by independent claims 11 and 22.

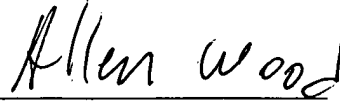
Returning now to independent claim 18, the Office Action rejects this claim for obviousness based on Beierlein. The present Amendment revises claim 18 to recite “first means” and “second means,” as in claims 11 and 22. Since Beierlein’s anode modification layer can no longer be characterized as the “transparent electrically conductive film” of claim 18 (for the reasons discussed above with respect to claims 11 and 22), and also since an ordinarily skilled person would not have been motivated to modify Beierlein’s arrangement by adding a “transparent electrically conductive film,” it is respectfully submitted that the rejection of claim 18 should be withdrawn.

The remaining rejected claims depend from the independent claims discussed above and recite additional limitations to further define the invention. They are therefore automatically patentable along with their independent claims and need not be further discussed.

It is noted that this application has been amended to include an additional independent claim. Accordingly, an excess claim fee of \$220 is included in a remittance that is being submitted concurrently. Should this remittance be accidentally missing or insufficient, though, any fees that may be needed can be charged to our Deposit Account number 18-0002.

For the foregoing reasons, it is respectfully submitted that this application is now in condition for allowance. Reconsideration of the application is therefore respectfully requested.

Respectfully submitted,

A handwritten signature in cursive script that reads "Allen Wood". The signature is written in dark ink and is positioned above a horizontal line.

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